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EXAMINER

MEW, KEVIN D

ART UNIT	PAPER NUMBER
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2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/029,124

Applicant(s)

GASPARD ET AL.

Examiner

Kevin Mew

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Response to Amendment

1. Applicant's Remarks/Arguments filed on regarding claims 1-42 have been considered.
Claims 1-48 are currently pending.

Claim Objections

2. Claims 27-28 are objected to because of the following informalities:

In line 1, claim 27, "The method of claim 26" should be amended to "The method of claim 25" instead. Appropriate correction is required.

In line 5, claim 28, "characteristics of said network element" should be amended to "characteristics of said network device."

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 25-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Jean et al. (US Publication 2002/0169884).

Regarding claim 25, Banginwar discloses a method of managing from a network management system (NMS) (device discovery, element 114, Fig. 1), network devices added to communication network (network 100, Fig. 1), comprising:

discovering from the NMS a network device newly added to said communication network (discovering newly added devices to network 100, col. 5, lines 43-46 and Fig. 1);

determining if said network device has routing capabilities (determining if the device is a router, col. 6, lines 54-62);

if said network device has routing capabilities, adding the network device to a list of detected devices (add routers of a specific IP range to a list of devices at the device proxy 116 to policy manage, col. 4, lines 54-62, col. 6, lines 24-31) and setting the status of said network device in said list set to uncommitted (identify devices which the proxy 116 can policy manage, col. 6, lines 22-23); and

removing said network device from said list upon receiving confirmation that said network device should be managed from said NMS (removing device from the list of devices at the proxy upon receiving a message from the device discovery that the device has failed, col. 6, lines 13-31).

Regarding claim 27, Banginwar discloses the method of claim 25, wherein said step of discovering comprises receiving at said NMS an SNMP notification from said network device upon connection to said communication network (receiving SNMP device specific information, col. 4, lines 62-65).

Regarding claim 28, Banginwar discloses the method of claim 27 further comprising the steps of:

sending request to network devices pertaining to a certain sub-network (send request to device proxies 116 pertaining to a list of IP address range); and

receiving response from said network device which identifies characteristics of said network element (receiving response from device proxies 116 which identifies device specific characteristics, col. 4, lines 16-65).

Regarding claim 26, Banginwar discloses the method of claim 28 wherein said step of sending comprises sending a SNMP request (SNMP protocol is used to obtain device specific information, col. 4, lines 62-65).

Regarding claim 29, Banginwar discloses the method of claim 28 wherein said step of receiving said second appropriate response comprises receiving a message comprising information about a type of said first device (col. 3, lines 55-67, col. 4, lines 1-45).

Regarding claim 30, Banginwar discloses the method of claim 29 wherein said step of receiving said second appropriate response comprises receiving a message identifying said type of said fifth device as a device having data forwarding capabilities (col. 3, lines 55-67, col. 4, lines 1-45).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-16, 18-20, 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jean et al. (US Publication 2002/0169884) in view of Aoyagi et al. (US Publication 20002/0032761).

Regarding claim 1, Jean discloses a method for automatic discovery of network devices (device discovery) within a managed network comprising the steps of:

selecting a first network address from a first set comprising a plurality of network addresses (selecting a legacy network device corresponding to an IP address, paragraph 0064);

sending a first message to said first network address (sending a SNMP discovery request to the IP address of the legacy network device, paragraphs 0061, 0064) requesting information about any device associated with said first network address (to request for the discovery information of the legacy device associated with the IP address, paragraphs 0063, 0064);

awaiting a first appropriate response to said first message (awaiting the response of the SNMP discovery response from the legacy network device, paragraph 0063 and elements 64, 65, Fig. 3);

receiving a first appropriate response from a first device associated with said first network address (receiving SNMP discovery information from the newly discovered legacy network device, paragraph 0064);

making said first device available for selection for management by a network management system (the discovery information of the newly discovered network legacy device is made available for comparison in the target description table, paragraph 0065);

Jean does not explicitly show selecting a second address from said first set of network addresses and repeating said sending, and awaiting steps for said second network address.

However, Aoyagi discloses a device discovery system in which the process of sending of a second SNMP discovery request message to a second network device is repeated after an error message is received from an MIB access module indicating the first network device cannot be found (see paragraphs 0383-0386 and Fig. 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auto-device discovery system of Jean with the teaching of Aoyagi in repeating the process of sending another SNMP discovery request message to another network device after an error message is received indicating the first network device is not responding such that the auto-device discovery system of Jean will select a second address from said first set of network addresses and repeat said sending, and await for said second network address.

The motivation to do so is to continue discovering other network devices even though one or more of the network devices cannot be discovered.

The combined method of Jean and Aoyagi does not explicitly show determining if said first device provides routing capabilities and if said first device provides routing capabilities, making said first device available for selection for management by a network management system.

However, Kracht discloses device discovery method in which a device type of router will be identified, making the router device available for selection to obtain the IP and MAC address translation maintained by the particular router (col. 10, lines 29-34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined auto-device discovery system of Jean and Aoyagi with the teaching of Kracht in determining if the device is of router type and then select the router to obtain the IP and MAC address translation information maintained by the router such that the auto-discovery system and method of Jean will comprise determining if said first device provides routing capabilities and if said first device provides routing capabilities, making said first device available for selection for management by a network management system..

The motivation to do so is to obtain additional information of the device type in order to better understand the actual configuration of each router and how it is physically linked to other devices within the network.

Regarding claim 2, Jean discloses the method of claim 1 further comprising the steps of:
failing to receive a second appropriate response to a second message sent to said second address within a response time period (fail to receive a response for a legacy network device within a expiration timer, paragraph 0064).

Jean does not explicitly show selecting a third network address from said first set of network addresses;

repeating said sending and awaiting steps for said third network address.

However, Aoyagi discloses a device discovery system in which the process of sending of a second SNMP discovery request message to a second network device is repeated after an error message is received from an MIB access module indicating the first network device cannot be found (see paragraphs 0383-0386 and Fig. 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auto-device discovery system of Jean with the teaching of Aoyagi in repeating the process of sending another SNMP discovery request message to another network device after an error message is received indicating the first network device is not responding such that the auto-device discovery system of Jean will select a third network address from said first set of network addresses and repeat said sending and await for said third network address.

The motivation to do so is to continue discovering other network devices even though one or more of the network devices cannot be discovered.

Regarding claim 3, Jean discloses the method of claim 1 wherein said first set of network addresses comprises a range of network addresses (a list of newly discovered legacy network devices that correspond to a list of IP addresses, paragraph 0063).

Regarding claim 4, Jean discloses the method of claim 1 wherein said first set of network addresses comprises a list of network addresses (a range of newly discovered legacy network devices that correspond to a list of IP addresses, paragraph 0063).

Regarding claim 5, Jean discloses all the aspects of the claimed invention set forth in the rejection of claim 1 above, except fails to disclose the method of claim 1 further comprising the steps of:

selecting a fourth network address from a second set comprising a plurality of network addresses;

sending a fourth message to said fourth network address requesting information about any device associated with said first network address (associated with an address, paragraph 0106);

awaiting a fourth appropriate response to said fourth message.

However, Aoyagi discloses a device discovery system in which the process of sending of a second SNMP discovery request message to a second network device is repeated after an error message is received from an MIB access module indicating the first network device cannot be found (see paragraphs 0383-0386 and Fig. 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auto-device discovery system of Jean with the teaching of Aoyagi in repeating the process of sending another SNMP discovery request message to another network device after an error message is received indicating the first network device is not responding such that the auto-device discovery system of Jean will select a fourth network

address from a second set comprising a plurality of network addresses; send a fourth message to said fourth network address requesting information about any device associated with said fourth network address; await a fourth appropriate response to said fourth message.

The motivation to do so is to continue discovering other network devices even though one or more of the network devices cannot be discovered.

Regarding claim 6, Jean discloses the method of claim 1 wherein said step of sending said first message comprises sending said first message using a network management protocol (sending SNMP discovery request, paragraph 0064).

Regarding claim 7, Jean discloses the method of claim 6 wherein said network management protocol comprises a Simple Network Management Protocol (SNMP) (sending SNMP discovery request, paragraph 0064).

Regarding claim 8, Jean discloses the method of claim 1 wherein said step of receiving said first appropriate response to said first message comprises receiving a message comprising information about a type of said first device (receiving SNMP device ID that indicates make and model of the device, paragraph 0060).

Regarding claim 9, Jean discloses the method of claim 8 wherein said step of receiving said first appropriate response to said first message comprises receiving a message identifying

said type of said first device as a device having data forwarding capabilities (discovery information includes a default router attached to the device, paragraphs 0055, 0063, 0064).

Regarding claim 10, Jean discloses the method of claim 2 wherein said step of failing to receive said second appropriate response to said second message comprises receiving a message comprising information about a type of a second device associated with said second network address (receiving SNMP device ID that indicates make and model of the device, paragraph 0060).

Regarding claim 11, Jean discloses the method of claim 10 wherein said step of failing to receive said second appropriate response to said second message comprises receiving a message identifying said type of said second device as a device other than a device having data forwarding capabilities (obtaining target table descriptor information including a default router attached to the device, paragraphs 0055, 0063, 0064).

Regarding claim 12, Jean discloses the method of claim 1 further comprising the step of obtaining configuration information for said first message prior to sending said first message (obtaining target table descriptor information including the IP address of each newly discovered legacy network device, paragraphs 0055, 0063, 0064).

Regarding claim 13, Jean discloses the method of claim 12 wherein said step of obtaining said configuration information for said first message comprises obtaining said configuration

information from said first set (obtaining target table descriptor information including the IP address of each newly discovered legacy network device, paragraphs 0055, 0063, 0064).

Regarding claim 14, Jean discloses the method of claim 12 wherein said step of obtaining said configuration information for said first message comprises obtaining a response time period (obtaining target table descriptor information including expiration timer information set by the PTD, paragraphs 0055, 0063, 0064).

Regarding claim 15, Jean discloses the method of claim 12 wherein said step of obtaining said configuration information for said first message comprises obtaining security parameters (obtaining SNMP device ID that indicates make and model of the device, paragraph 0060).

Regarding claim 16, Jean discloses the method of claim 1 wherein said step of making said first device available for selection for management by a network management system comprises adding said first device to a set of discovered devices (the discovery information of the newly discovered network legacy device is made available for comparison in the target description table, paragraph 0065).

Regarding claim 18, Jean discloses all the aspects of the claimed invention set forth in the rejection of claim 1 above, except fails to disclose the method of claim 16 further comprising the step displaying said set of discovered devices on a display device.

However, Aoyagi discloses a device discovery system in which the physical configuration of network devices is monitored in a network configuration of chart display (paragraph 0160 and Fig. 36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auto-device discovery system of Jean with the teaching of Aoyagi in using a visual display to show the discovered devices such that the auto-device discovery system of Jean will displaying said set of discovered devices on a display device.

The motivation to do so is to render on-screen the network configuration of devices in a tree structure and display its layout on a floor map.

Regarding claim 19, Jean discloses the method of claim 1 further comprising the step of creating said first set of network addresses (a list of newly discovered legacy network devices that correspond to a list of IP addresses, paragraph 0063).

Regarding claim 20, Jean discloses the method of claim 19 wherein said step of creating said first set of network addresses comprises receiving a beginning network address and an ending network address (a list of newly discovered legacy network devices that correspond to a list of IP addresses, paragraph 0063, Fig. 4).

Regarding claim 22, Jean also discloses receiving a response of the SNMP discovery information from the newly discovered legacy network device. (see paragraph 0065).

Jean does not explicitly show further comprising the steps of: receiving a fifth appropriate response from a fifth device associated with said first network address; making said fifth device available for selection for management by a network management system.

However, Aoyagi discloses a device discovery system in which the process of sending of a second SNMP discovery request message to a second network device is repeated after a response is received from an MIB access module indicating the first network device is found (see paragraphs 0383-0386 and Fig. 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auto-device discovery system of Jean with the teaching of Aoyagi in repeating the process of sending another SNMP discovery request message to another network device after a response indicating the first network device is responding is received such that the auto-device discovery system of Jean will select a fourth network address from a second set comprising a plurality of network addresses; send a fourth message to said fourth network address requesting information about any device associated with said fourth network address; await a fourth appropriate response to said fourth message.

The motivation to do so is to continue discovering other network devices even though one or more of the network devices cannot be discovered.

Regarding claim 23, Jean discloses the method of claim 22 wherein said step of receiving said fifth message from said fifth device comprises receiving a SNMP message (receiving SNMP discovery response, paragraph 0064).

Regarding claim 24, Jean discloses the method of claim 22 wherein said step of making said fifth device available for selection for management by a network management system comprises adding said fifth device to a set of discovered devices (the table descriptor entry is modified with the new information of corresponding legacy network device, paragraph 0065).

5. Claims 32-35, 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyagi et al. (US Publication 20002/0032761).

Regarding claim 32, Aoyagi discloses all the aspects of the claimed invention set forth in the rejection of claim 31 above, except fails to disclose the apparatus of claim 31 further comprising a user interface for accepting input from a user, said user interface comprising means for said user to specify said discovery range.

However, Aoyagi discloses an auto discovery module for searching all the IP addresses specified in the network range (see paragraphs 0393).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auto-device discovery system of Aoyagi with the teaching of Aoyagi in searching for a range of IP addresses during the auto discovery process of network devices such that the graphical user interface of Aoyagi will accept input from a user, said user interface comprising means for said user to specify said discovery range.

The motivation to do so is to provide a visual display for user to easily specify the range of IP addresses of the network devices during auto-discovery of network devices.

Regarding claim 33, Aoyagi discloses the apparatus of claim 32 wherein said user interface comprises means for said user to select one or more of said discovered devices displayed in said discovered devices window for management by a network management (information of a device is displayed for management in area 3602 in the network configuration of chart display, see paragraph 0339 and Fig. 36).

Regarding claim 34, Aoyagi discloses the apparatus of claim 33 further comprising a network communications system for sending network communications to each network address in said discovery range (sending a SNMP request message to the IP address of each network device in the discovery range, paragraph 0385).

Regarding claim 35, Aoyagi discloses the apparatus of claim 32 wherein said range comprises a plurality of contiguous network addresses (a plurality of contiguous IP addresses, see Fig. 46a).

Regarding claim 37, Aoyagi discloses the apparatus of claim 34 comprising a message response analyzer for analyzing responses received from network addresses in said discovery range (analyzing network device information display areas 3601, 3602, see paragraph 0339, Fig. 36).

Regarding claim 38, Aoyagi discloses the apparatus of claim 37 wherein said message response analyzer comprises identification means for identifying a type of a device sending a

response (network map area 3601 in the network configuration of chart display, identifies whether the device is a type of router or non-intelligent hub, see Fig. 36).

Regarding claim 39, Aoyagi discloses the apparatus of claim 34 wherein said network communications system comprises means for receiving messages originating from network devices (MIB access module 612 receiving response messages from network devices, paragraph 0385, and Fig. 6).

Regarding claim 40, Aoyagi discloses the apparatus of claim 34 wherein said means for receiving messages originating from network devices comprises means for receiving SNMP messages (MIB access module 612 receiving SNMP response messages from network devices, paragraph 0385, and Fig. 6).

Regarding claim 41, Aoyagi discloses the apparatus of claim 34 wherein said discovery range comprises IP addresses (an auto discovery module for searching all the IP addresses specified in the network range, see paragraphs 0393).

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jean et al. (US Publication 2002/0169884) in view of Aoyagi et al. (US Publication 20002/0032761), and in further view of Bearden et al. (USP 6,917,626).

Regarding claim 17, Jean discloses all the aspects of the claimed invention set forth in the rejection of claim 16 above, except fails to explicitly show the method of claim 16 wherein said

step of adding said first device to a set of discovered devices comprises the step of deleting an existing device associated with said first network address from said set of discovered devices prior to adding said first device to said set of discovered devices. However, Bearden discloses that each device is uniquely assigned an address. Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to modify the device discovery method and system of Jean with the further teaching of Jean such that an existing device associated with a particular uniquely assigned address must be deleted from a set of discovered devices first prior to adding this device to the set of discovered devices. The motivation to do so is to make sure a network address is uniquely associated with only one network device such that the device is easily identified by this network address.

7. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jean et al. (US Publication 2002/0169884) in view of Aoyagi et al. (US Publication 20002/0032761), and in further view of Novaes (USP 6,791,981).

Regarding claim 21, Jean discloses all the aspects of the claimed invention set forth in the rejection of claim 19 above, except fails to explicitly show the method of claim 19 wherein said step of creating said first set of network addresses comprises receiving a data file containing a plurality of discrete network addresses. However, Novaes discloses storing IP addresses in a configuration file. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the device discovery method and system of Jean with the teaching of Novaes such that the plurality of network addresses will be received in a data file.

The motivation to do so is to make the configuration file containing the IP addresses available to other network nodes during broadcast.

8. Claims 31, 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyagi et al. (US Publication 20002/0032761) in view of Kracht.

Regarding claim 31, Aoyagi discloses an apparatus for automatic discovery of network devices within a managed network comprising:

a display device comprising a discovery range window for displaying a network address range for discovery of network devices (graphical user interface GUI for displaying a range of network addresses for discovery of network devices, elements 3601, 3603, 3604, Fig. 36) and a discovered devices window for displaying identification information for devices discovered within said network address range (a terminal information window showing the IP address of a network device, element 3602, Fig. 36).

Aoyagi does not said devices providing capabilities.

However, Kracht discloses device discovery method in which a device type of router will be identified, making the router device available for selection to obtain the IP and MAC address translation maintained by the particular router (col. 10, lines 29-34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined auto-device discovery system of Jean and Aoyagi with the teaching of Kracht in determining if the device is of router type and then select the router to obtain the IP and MAC address translation information maintained by the router such

that the auto-discovery system and method of Jean will comprise determining if said first device provides routing capabilities.

The motivation to do so is to obtain additional information of the device type in order to better understand the actual configuration of each router and how it is physically linked to other devices within the network.

Regarding claim 42, Aoyagi discloses the apparatus of claim 31 wherein said discovered devices window comprises information identifying a discovered device's type (network map area 3601 in the network configuration of chart display, identifies whether the device is a type of router or non-intelligent hub, see Fig. 36).

9. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyagi et al. in view of Bearden et al. (USP 6,917,626).

Regarding claim 36, Aoyagi discloses all the aspects of the claimed invention set forth in the rejection of claim 32 above, except fails to disclose the apparatus of claim 32 wherein said range comprises a plurality of discreet, non-contiguous network addresses.

However, Bearden discloses network devices with IP addresses that belong to another subnet (see paragraph 0012, 0013).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auto-device discovery system of Jean with the teaching of Bearden in using a plurality of IP addresses for discovering devices located in another subnet

such that the range of addresses being used can be a plurality of discreet, non-contiguous network addresses.

The motivation to do so is to discover legacy network devices that are located in another network.

10. Claims 43, 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jean et al. (US Publication 2002/0169884) in view of Nelson et al. (USP 5,835,720), and in further view of Banginwar (USP 6,611,863).

Regarding claim 43, Jean and Nelson disclose all the aspects of claim 28 above, except fails to explicitly show the method of claim 28 wherein said step of sending the request to the network devices pertaining to a certain sub-network comprises sending the request to the network devices pertaining to a list of addresses.

However, Banginwar discloses device discovery method in which devices with a specific range of IP addresses will be identified and discovered (col. 4, lines 49-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auto-device discovery system of Jean with the teaching of Banginwar receiving device-specific characteristics, such as device type, of network devices collected at the device proxies such that the auto-discovery mechanism of Jean will comprise said step of sending the request to the network devices pertaining to a certain sub-network comprises sending the request to the network devices pertaining to a list of addresses.

The motivation to do so is to policy manage all those devices of a specific IP address range.

Regarding claim 46, the combined method of Jean and Nelson discloses all the aspects of claim 28 above, except fails to disclose the method of claim 28 wherein the step of receiving said response from said network device which identifies characteristics of said network element further comprises receiving the response from the network device which provides a description of the network device.

However, Banginwar discloses device discovery method in which the device discovery module will receive device-specific characteristics, such as device type, of network devices collected at the device proxies (col. 3, lines 55-67, col. 4, lines 1-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auto-device discovery system of Jean with the teaching of Banginwar receiving device-specific characteristics, such as device type, of network devices collected at the device proxies such that the auto-discovery mechanism of Jean will comprise receiving said response from said network device which identifies characteristics of said network element further comprises receiving the response from the network device which provides a description of the network device.

The motivation to do so is to match devices to specific managed policies based on the device-specific characteristics received about the discovered devices.

Regarding claim 47, the combined method of Jean and Nelson discloses all the aspects of claim 28 above, except fails to disclose the method of claim 28 wherein the step of receiving said

response from said network device which identifies characteristics of said network element further comprises receiving the response from the network device which provides an identification of the network device.

However, Banginwar discloses device discovery method in which the device discovery module will receive device-specific characteristics, such as device type, of network devices collected at the device proxies (col. 3, lines 55-67, col. 4, lines 1-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auto-device discovery system of Jean with the teaching of Banginwar receiving device-specific characteristics, such as device type, of network devices collected at the device proxies such that the auto-discovery mechanism of Jean will comprise receiving the response from the network device which provides an identification of the network device (device type).

The motivation to do so is to match devices to specific managed policies based on the device-specific characteristics such as the device type received about the discovered devices.

Regarding claim 48, the combined method of Jean and Nelson discloses all the aspects of claim 28 above, except fails to disclose the method of claim 28 wherein the step of receiving said response from said network device which identifies characteristics of said network element further comprises receiving the response from the network device which identifies services capabilities of the network device.

However, Banginwar discloses device discovery method in which the device discovery module will receive device-specific characteristics, such as device capability, of network devices collected at the device proxies (col. 3, lines 55-67, col. 4, lines 1-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auto-device discovery system of Jean with the teaching of Banginwar receiving device-specific characteristics, such as device capability, of network devices collected at the device proxies such that the auto-discovery mechanism of Jean will comprise receiving the response from the network device which identifies services capabilities of the network device.

The motivation to do so is to match devices to specific managed policies based on the device-specific characteristics, such as the device capability, received about the discovered devices.

11. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jean et al. (US Publication 2002/0169884) in view of Nelson et al. (USP 5,835,720), and in further view of Kracht.

Regarding claim 44, Jean and Nelson disclose all the aspects of claim 28, except fails to disclose the method of claim 28 wherein said step of adding is performed only if said network device has internet protocol (IP) forwarding capability.

However, Kracht discloses device discovery method in which a device type of router will be identified, making the router device available for selection to obtain the IP and MAC address translation maintained by the particular router (col. 10, lines 29-34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined auto-device discovery system of Jean and Aoyagi with the teaching of Kracht in determining if the device is of router type and then select the router to obtain the IP and MAC address translation information maintained by the router such that the auto-discovery system and method of Jean will comprise performing said step of adding is performed only if said network device has internet protocol (IP) forwarding capability.

The motivation to do so is to obtain additional information of the device type in order to better understand the actual configuration of each router and how it is physically linked to other devices within the network.

12. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jean et al. (US Publication 2002/0169884) in view of Nelson et al. (USP 5,835,720), and in further view of Soumiya et al. (USP 7,136,357).

Regarding claim 45, Jean and Nelson disclose all the aspects of claim 28, except fails to disclose the method of claim 28 wherein said step of adding is performed only if said network device has multiprotocol label switching (MPLS) capability.

However, Soumiya discloses a method and system for performing discovery of MPLS routers (col. 25, lines 20-29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined auto-device discovery system of Jean and Aoyagi with the teaching of Soumiya in discovery MPLS routers or routers that support MPLS protocol

such that the discovery method of Jean will comprise said step of adding is performed only if said network device has multiprotocol label switching (MPLS) capability.

The motivation to do so is to use label function of MPLS to effect load distribution and switch IP packets more effectively.

Response to Arguments

13. Applicant's arguments with respect to claims 1-42 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2616

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 571-272-3141. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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